DS 654

OBSTRUCTION DATA SHEET

ODS 654
LAWRENCE MUNICIPAL AIRPORT
LAWRENCE, MASSACHUSETTS

DIGITIZED FROM

OC 654
SURVEYED JULY 1990
4TH EDITION

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See SPECIAL NOTICES in "Dates of Latest Editions, Airport Obstruction Charts - Obstruction Data Sheets," for possible corrections. National Oceanic and Atmospheric Administration (NOAA) publications are available through NOAA Distribution Branch (N/CG33), National Ocean Service, Riverdale, MD 20737. Telephone: 301-436-6990

OBSTRUCTION DATA SHEET

The Obstruction Data Sheet (ODS) provides digital obstruction and runway data for use in aircraft arrival and departure planning. This information has been obtained using field survey and photogrammetric methods by the Photogrammetry Branch of the National Ocean Service in accordance with Federal Aviation Regulations Part 77 (FAR-77), "Objects Affecting Navigable Airspace" and FAA Nr. 405, "Specifications - Airport Obstruction Chart and Related Products."

The ODS is a derivative of the Airport Obstruction Chart (OC). The source OC is indicated on the ODS cover. All objects, both obstructing and nonobstructing, that carry an elevation on the OC are listed in the ODS. The ODS (and OC) depict a representation of objects that existed at the time of the OC field survey.

ODS information is arranged as follows:

1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the physical end and threshold of Runway 9R. Objects in the Runway 27L approach or primary are listed with Runway 27L. (Objects in the common 9R/27L primary area are listed with both runways.)

2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).

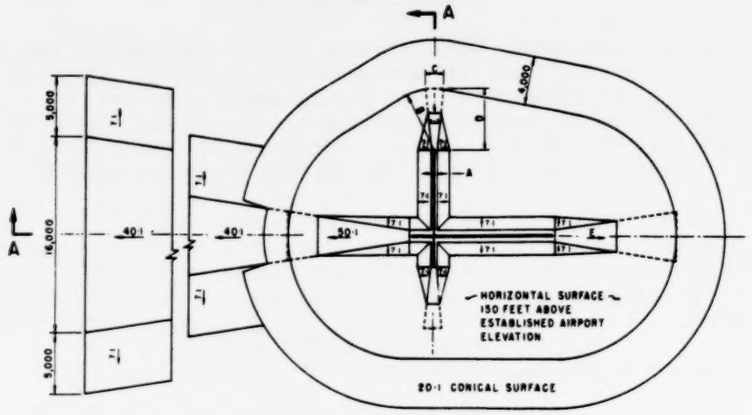
3. Runway configuration and runway lengths, widths, and elevations are presented on the ODS last page.

The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows (see footnote 2 on page 3):

A(V) ..... Utility runway - visual approach only
A(NP) .... Utility runway - nonprecision instrument approach
B(V) ..... Nonutility runway - visual approach only
C .... Nonutility runway - nonprecision instrument approach with visibility minimums greater than 3/4 mile
D .... Nonutility runway - nonprecision instrument approach with visibility minimums as low as 3/4 mile
PIR ...... Precision instrument runway
SUPLC ... Supplemental C underlying a B(V)

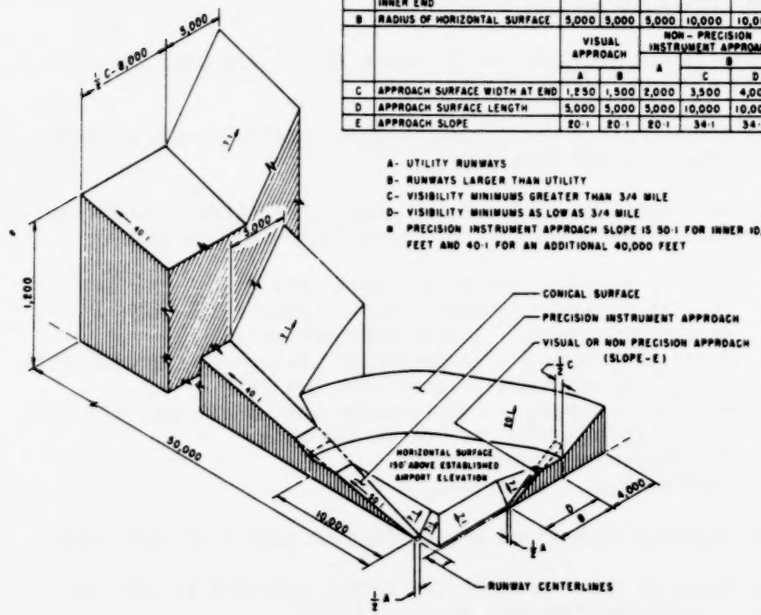
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

Primary surface width is determined by the widest approach at the two approach/primary interfaces for that runway.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B C	B D	
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	B C	B D	
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

A- UTILITY RUNWAYS
B- RUNWAYS LARGER THAN UTILITY
C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
* PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET



ISOMETRIC VIEW OF SECTION A-A

FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

X^{1}	X^{2} XXXX/XXXX^{3}	XXXXXX.XXX^{4}	XXXXXXX.XXX^{4}	XXXXXXX^{5}		XXXX/XXXX^{6}	XXXXXX.XXX^{7}	XXXXXXX.XXX^{7}					
OBJECT		LAT	LONG	A^{8}	ELEV^{9}	AGL^{10}	HAR^{11}	HAT^{11}	HAA^{11}	DEND^{12}	DTHR^{12}	DCLN^{12}	PNTR^{13}
XXXXXXXXXXX		XXXXXX.XXX	XXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXX		XXXXXX.XXX	XXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX

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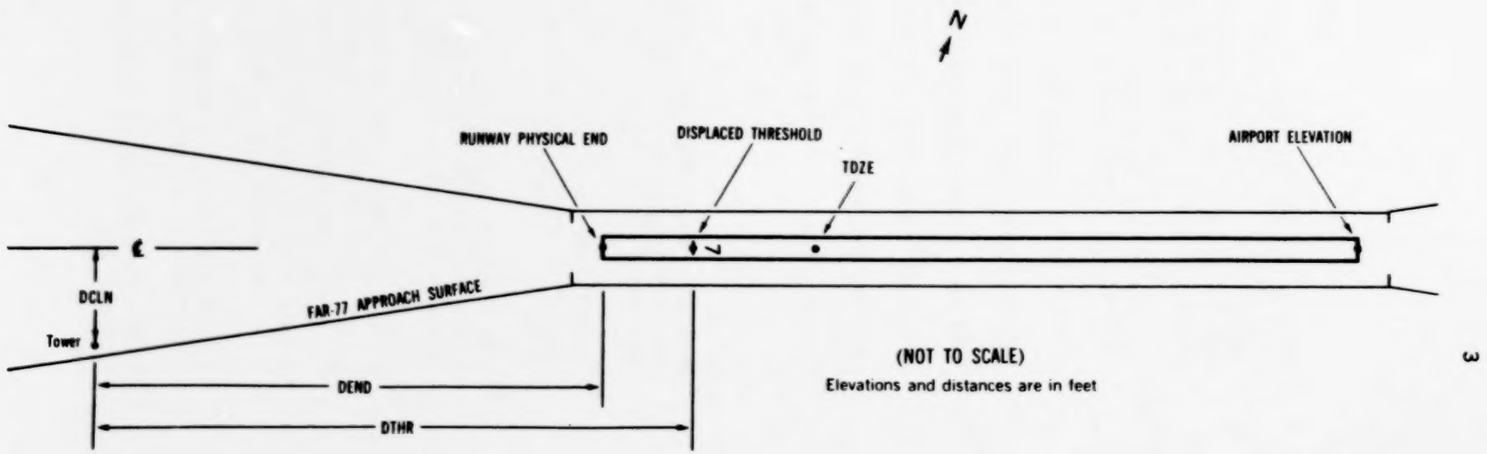


(NOT TO SCALE)

Elevations and distances are in feet

EXPLANATION OF FOOTNOTES

[1] Data block identifier. If a runway number is entered (reference runway), this data block will contain data pertinent to the reference runway and to objects in the FAR-77 approach and primary area of the reference runway. If ARP is entered, this data block will contain the ARP position and data relative to all objects not in an FAR-77 approach or primary area.

[2] For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed.)

[3] Reference runway approach physical end elevation/touchdown zone elevation

[4] Latitude and longitude of reference runway approach physical end

[5] Reference runway geodetic azimuth reckoned clockwise from south

[6] Reference runway displaced threshold elevation/touchdown zone elevation

[7] Latitude and longitude of reference runway displaced threshold

[8] Accuracy Code:

Horizontal	Vertical
1 = 20	A = 2
2 = 40	B = 5
	C = 20

[9] Mean Sea Level (MSL) elevation at top of object. This value includes 15 feet added to noninterstate roads, 17 feet added to interstate roads, and 23 feet added to railroad tracks.

[10] Height above ground level (AGL). AGLs are provided only for those objects appearing on the OC that are equal to, or greater than, 200 feet AGL. AGL accuracy is ±10 feet.

[11] HAA - Height above airport
HAR - Height above reference runway approach physical end
HAT - Height above reference runway touchdown zone elevation

[12] DEND - Distance along reference runway centerline from point perpendicular to object to reference runway approach physical end
DTHR - Distance along reference runway centerline from point perpendicular to object to reference runway threshold
DCLN - Distance left (L) or right (R) of reference runway centerline as observed facing forward in a landing aircraft.

A negative value for DEND or DTHR indicates object is in primary area on roll-out side of zero distance point.

[13] PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

OC0654

AIRPORT ELEVATION 149

5 PIR 135/144 424238.935N 0710745.811W 2180953

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	424316.30	0710710.46	1A	155		20	11	6	-4605		263L	19
TREE	424308.08	0710706.56	1A	148		13	4	-1	-4130		480R	11
BUSH	424310.95	0710716.19	1A	165		30	21	16	-3915		264L	27
GROUND	424301.73	0710715.34	1A	144		9	0	-5	-3220		362R	4
OL ANEMOMETER	424257.85	0710719.59	1A	169		34	25	20	-2715		355R	27
OL ON WINDSOCK	424256.56	0710720.59	1A	176		41	32	27	-2567		377R	33
GROUND	424255.48	0710721.51	1A	151		16	7	2	-2438		391R	8
TREE	424259.07	0710732.77	1A	168		33	24	19	-2204		494L	24
TREE	424255.86	0710734.52	1A	160		25	16	11	-1868		396L	16
GROUND	424250.61	0710726.64	1A	147		12	3	-2	-1813		395R	3
BUSH	424248.29	0710739.99	1A	146		11	2	-3	-1013		244L	5
OL ON GLIDE SLOPE	424244.30	0710734.48	1A	183		48	39	34	-950		330R	42
BUSH	424242.83	0710732.94	1A	155		20	11	6	-904		512R	14
TREE	424244.04	0710746.71	1A	142		7	-2	-7	-365		372L	4
BUSH	424237.76	0710739.62	1A	140		5	-4	-9	-192		437R	3
BUSH	424239.14	0710748.70	1A	140		5	-4	-9	117		183L	5
BUSH	424234.64	0710742.22	1A	146		11	2	-3	176		480R	11
TREE	424237.88	0710751.63	1A	142		7	-2	-7	353		276L	4
TREE	424233.01	0710744.19	1A	154		19	10	5	397		466R	15
TREE	424235.50	0710749.42	1A	143		8	-1	-6	440		3R	3
TREE	424232.46	0710748.97	1A	144		9	0	-5	661		220R	-1
OL ON TANK	424055.49	0711014.32	1A	317		182	173	168	15086		2252L	-140

OC0654

AIRPORT ELEVATION 149

23 C 135/144 424317.765N 07107 4.422W 0381021

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	424234.64	0710742.22	1A	146		11	2	-3	-5176		480L	11
BUSH	424239.14	0710748.70	1A	140		5	-4	-9	-5117		183R	5
BUSH	424237.76	0710739.62	1A	140		5	-4	-9	-4808		437L	3
TREE	424244.04	0710746.71	1A	142		7	-2	-7	-4635		372R	4
BUSH	424242.83	0710732.94	1A	155		20	11	6	-4096		512L	14
OL ON GLIDE SLOPE	424244.30	0710734.48	1A	183		48	39	34	-4050		330L	42
BUSH	424248.29	0710739.99	1A	146		11	2	-3	-3987		244R	5
GROUND	424250.61	0710726.64	1A	147		12	3	-2	-3187		395L	3
TREE	424255.86	0710734.52	1A	160		25	16	11	-3132		396R	16
TREE	424259.07	0710732.77	1A	168		33	24	19	-2796		494R	24
GROUND	424255.48	0710721.51	1A	151		16	7	2	-2562		391L	8
OL ON WINDSOCK	424256.56	0710720.59	1A	176		41	32	27	-2433		377L	33
OL ANEMOMETER	424257.85	0710719.59	1A	169		34	25	20	-2285		355L	27
GROUND	424301.73	0710715.34	1A	144		9	0	-5	-1780		362L	4
BUSH	424310.95	0710716.19	1A	165		30	21	16	-1085		264R	27
TREE	424308.08	0710706.56	1A	148		13	4	-1	-870		480L	11
BUSH	424316.30	0710710.46	1A	155		20	11	6	-395		263R	19
TREE	424322.37	0710706.11	1A	150		15	6	1	288		387R	12
TREE	424320.37	0710659.95	1A	140		5	-4	-9	413		100L	-1
TREE	424324.91	0710706.09	1A	154		19	10	5	492		545R	10
TREE	424324.21	0710650.64	1A	193		58	49	44	1149		405L	30
OL ON LOCALIZER	424329.54	0710651.87	1A	142		7	-2	-7	1516		0R	-32
TREE	424331.70	0710654.13	1A	180		45	36	31	1584		268R	4
TREE	424328.07	0710643.09	1A	216		81	72	67	1804		607L	34
TREE	424342.20	0710625.37	1A	296		161	152	147	3746		762L	57
TREE	424341.84	0710623.51	1A	311		176	167	162	3804		894L	70
TREE	424354.11	0710626.40	1A	279		144	135	130	4647		43R	13
OL ON POLE	424351.96	0710618.88	1A	281		146	137	132	4823		532L	10
OL ON POLE	424354.33	0710621.22	1A	295		160	151	146	4903		247L	22
TREE	424419.54	0710608.73	1A	317		182	173	168	7486		598R	-32
ROD ON OL POLE	424424.80	0710546.16	1A	326		191	182	177	8945		396L	-66
OL VOR/DME	424425.18	0710543.23	1A	324		189	180	175	9111		545L	-73

OC0654

AIRPORT ELEVATION 149

14 A(V) 120/120 424315.950N 0710749.678W 3014223

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	424254.27	0710704.79	1A	155		35	35	6	-4004		106R	6
GROUND	424301.73	0710715.34	1A	144		24	24	-5	-2937		123L	-1

32 A(V) 149/ 424255.698N 07107 5.228W 1214254 148/149 424256.721N 07107 7.474W

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	424301.73	0710715.34	1A	144		-5	-5	-5	-964	-767	123R	-1
BUSH	424254.27	0710704.79	1A	155		6	6	6	104	301	106L	6
BUSH	424254.53	0710702.42	1A	159		10	10	10	241	438	9R	8
VENT ON OL BUILDING	424253.64	0710702.63	1A	165		16	16	16	274	471	75L	12
OL ON POLE	424252.26	0710700.83	1A	172		23	23	23	462	659	123L	10
OL ON POLE	424252.90	0710659.60	1A	169		20	20	20	507	704	20L	5
OL ON POLE	424253.91	0710657.62	1A	168		19	19	19	579	776	144R	1
TREE	424252.72	0710656.58	1A	171		22	22	22	708	905	83R	-3
TREE	424241.16	0710631.94	1A	219		70	70	70	2888	3085	54R	-64

AIRPORT ELEVATION 149

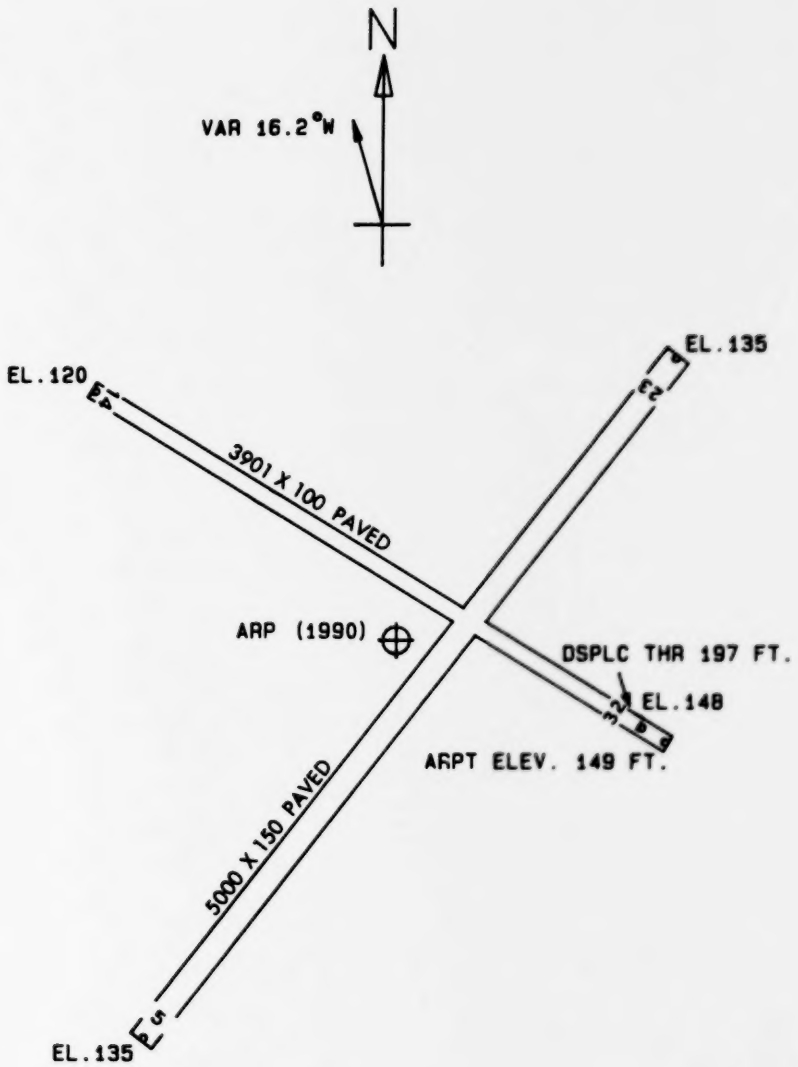
ARP 424301.626N 0710726.141W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
TREE	424304.60	0710737.02	1A	182		33	306 33	866
OL ON HANGAR	424311.50	0710721.43	1A	162		13	35 34	1060
ROD ON LIGHT POLE	424313.09	0710729.76	1A	171		22	3 6	1191
TREE	424307.20	0710740.41	1A	171		22	314 8	1205
TREE	424312.74	0710719.17	1A	192		43	41 2	1240
ANTENNA & ABCN ON OL ATCT	424252.07	0710714.30	1A	233		84	153 46	1310
TREE	424304.35	0710708.88	1A	162		13	94 7	1318
ANTENNA ON BUILDING	424302.40	0710706.97	1A	190		41	103 4	1433
OL ON FLOODLIGHT POLE	424301.72	0710745.53	1A	187		38	286 35	1448
TREE	424305.98	0710707.24	1A	161		12	88 52	1479
TREE	424301.75	0710704.87	1A	208		59	105 44	1588
ANTENNA ON HANGAR	424315.40	0710737.60	1A	153		4	344 41	1636
TREE	424308.30	0710703.53	1A	169		20	84 23	1818
TREE	424251.97	0710705.22	1A	198		49	138 14	1842
TREE	424257.68	0710701.18	1A	184		35	118 18	1906
TREE	424319.05	0710714.85	1A	207		58	41 44	1955
OL ON POLE	424251.22	0710703.11	1A	176		27	137 42	2016
TREE	424310.99	0710701.16	1A	163		14	79 15	2092
TREE	424312.55	0710752.44	1A	165		16	315 35	2253
TREE	424315.09	0710752.88	1A	141		-8	320 31	2417
TREE	424317.87	0710749.95	1A	143		-6	328 59	2422
TREE	424311.78	0710656.18	1A	199		50	81 31	2462
TREE	424237.82	0710734.47	1A	192		43	210 40	2489
BUSH	424315.11	0710658.21	1A	143		-6	72 59	2492
TREE	424321.06	0710748.53	1A	177		28	335 51	2581
TREE	424253.30	0710652.45	1A	186		37	124 43	2653
TREE	424235.86	0710736.53	1A	193		44	212 45	2721
TREE	424318.53	0710653.93	1A	186		37	70 46	2951
TREE	424233.71	0710739.83	1A	177		28	216 5	3005
TREE	424318.44	0710652.80	1A	198		49	71 50	3015
TREE	424231.92	0710743.41	1A	160		11	219 25	3272
OL STACK	424334.32	0710719.72	1A	297	235	148	24 27	3345
TREE	424318.41	0710646.12	1A	231		82	76 34	3437

AIRPORT ELEVATION 149

ARP 424301.626N 0710726.141W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
TREE	424321.31	0710643.75	1A	235		86	74 0	3740
ROD ON OL STACK	424241.18	0710808.95	1A	198		49	253 16	3808
TREE	424324.69	0710642.54	1A	225		76	70 33	4006
TREE	424235.09	0710632.27	1B	290		141	139 56	4836
TREE	424233.08	0710631.98	1B	322		173	141 45	4970
ROD ON OL POLE	424225.97	0710635.42	1B	417		268	149 50	5232
TREE	424337.12	0710621.66	1A	315		166	69 27	6007
TREE	424317.89	0710606.04	1B	320		171	90 48	6202
WEATHER VANE ON SPIRE	424158.41	0710736.67	1B	281		132	203 12	6448
TREE	424322.52	0710603.95	1B	335		186	87 10	6490
ROD ON STACK	424218.00	0710831.43	1A	295	259	146	244 2	6578
ANTENNA ON OL STANDPIPE	424232.93	0710848.78	1B	312		163	261 0	6819
ROD ON OL CLOCK TOWER	424250.55	0710856.71	1B	313		164	276 48	6854
OL ON STANDPIPE	424337.49	0710603.03	1B	368		219	75 51	7188
OL ON POLE	424254.86	0710519.02	1B	382		233	110 19	9515
ROD ON OL POLE	424137.83	0710619.81	1B	374		225	165 55	9823
WEATHER VANE ON CLOCK TWR	424210.45	0710918.48	1A	304	254	155	254 31	9858
ROD ON OL POLE	424356.42	0710535.62	1B	374		225	72 16	9941
TREE	424328.34	0710510.79	1B	342		193	91 12	10460
TREE	424117.29	0710705.44	1B	303		154	187 52	10675
TREE	424347.21	0710516.50	1B	375		226	80 41	10721
POLE	424306.48	0710502.23	1B	332		183	103 34	10755
TREE	424116.60	0710659.45	1B	322		173	185 35	10818
TREE	424315.23	0710502.30	1B	324		175	98 53	10826
POLE	424303.40	0710459.01	1B	332		183	105 15	10985
TREE	424112.35	0710650.62	1B	329		180	182 43	11376
TREE	424321.69	0710456.17	1B	320		171	95 54	11378
ROD ON OL MICROWAVE TWR	424217.58	0710952.94	1A	321	276	172	264 4	11832
TREE	424449.60	0710607.95	2C	331		182	44 17	12391
TREE	424451.49	0710552.01	2C	336		187	48 28	13155
TREE	424459.33	0710851.66	2C	341		192	348 2	13518
TREE	424041.34	0710639.23	2C	421		272	182 20	14628
ANT ON OL MICROWAVE TWR	424523.16	0710645.17	2C	432		283	28 15	14651
OL RADIO TOWER	424027.56	0711125.06	2A	606	402	457	245 4	23699



TOUCHDOWN ZONE RUNWAY	ELEVATION
5	144
23	144
14	120
32	149

LAWRENCE MUNICIPAL AIRPORT

LAWRENCE, MASSACHUSETTS

(NOT TO SCALE)